TODAY'S INNOVATIVE INITIATIVES

A HEALTHY FUTURE

FOR TOMORROW'S GOOD HEALTH

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About This Issue

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A boy waits in Manhica, Mozambique, to be tested for malaria, which kills more than 780,000 people worldwide every year.

Few issues matter more to people around the world than health. Good health increases a person's chances of getting an education, earning a living, starting a family and leading a long and fulfilling life. Improvements in public health make communities more robust, advances in development more sustainable and economic growth more rapid.

Disease knows no border; malady in one region can affect health and security in another. In the era of globalization, all countries have a stake in promoting good health. Today, in many developing countries, the threat posed by HIV/AIDS, malaria, tuberculosis and other infectious diseases is compounded by such chronic conditions as cardiovascular disease and diabetes. Traditional, disease-specific approaches are proving inadequate to address this compound burden. Health systems in both developed and developing countries are straining to treat those suffering from mental illness and trauma.

This issue of *eJournal USA* considers the factors that contribute to success in improving health — and health systems — in many parts of the world. Increasing the capacity of developing countries to care for their populations themselves is an element common to many successful programs. Physicians Vanessa Bradford Kerry and David Bangsberg call for steady investments by the United States and other donor countries to bolster recipient countries' health care systems, with an emphasis on training health care workers. Involving the recipients of development aid in planning and managing health programs is another recurrent element. The U.S. Global Health Initiative described in this issue takes its cue from new thinking about health based on these and other approaches. Other articles make the case for engaging communities, patients, diaspora groups and idealistic innovators in efforts to attack disease on many fronts and from many directions.

— *The Editors*

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During the 2003 SARS epidemic, this child raised concerns at the Taipei International Airport that he might carry the SARS virus. In the globalized world, viruses travel as fast as people.

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A Healthy Future

A Marshall Plan for Global Health: Greater Capacity, Better Results

David Bangsberg, MD, MPH, and
Vanessa Bradford Kerry, MD, MSc

Health is a global public good, capable of transcending borders and populations. Because ill citizens are less economically productive, poor health fuels economic and social inequity, while public health improvements correlate instead with economic gains. In short, the health of a country's population both reflects and contributes to its economic and social conditions.

A nurse prepares to administer an injection to a tuberculosis patient at a state hospital in Gauhati, India.

© AP Images
A South African mobile clinic supported in part by USAID provides HIV testing and counseling to passersby.

Health Is Development

Failure to address poor health undermines economic development. For example:

• Premature death from heart disease, stroke and diabetes reduces gross domestic product between 1 percent and 5 percent in low- and middle-income countries, according to the World Health Organization (WHO).

• Two-thirds of Zambian households suffered devastating declines in economic, social and educational status when their breadwinners died of AIDS: 80 percent of families reported decrease in income, 61 percent moved to cheaper housing, 39 percent lost access to clean water, and 20 percent of children dropped out of school, according to the U.N. Development Programme.

• The WHO calculates 3 percent economic growth when life expectancy increases by 10 years.

Strategies to improve health are integral to the success of economic aid and development programs, and modest investments can secure sustainable success aginst many of the world's most feared diseases. U.S. and international investments to improve health in developing countries already have eradicated smallpox, nearly ended the scourge of polio and prevented other diseases through vaccination. According to the Joint U.N. Programme on HIV/AIDS, more than seven million people have started HIV treatment worldwide, and antiretroviral therapy has helped decrease the number and rate of new infections compared with a decade ago.

However, the United States and its international partners can have an even greater impact by transitioning from short-term, disease-oriented approaches to more long-term, coordinated investments designed to bolster health systems and related human resources. For example, coordinated, sustained investments have enabled Rwanda to pay for approximately 50 percent of its own health expenditures since 2008.

Reaping Rewards Of Cooperative Investment

Though President Harry Truman committed $20 billion in long-term, low-interest loans to individual European countries at the end of World War II, this investment failed to reverse Europe's social and economic

problems. In June 1947, Secretary of State George C. Marshall announced a new plan that required aid recipients to fashion multilateral solutions to their common problems. The coordinated Marshall Plan led to decades of economic development and political stability in Europe.

In our increasingly interconnected and interdependent world, no country can ignore the health problems of other countries.

A well-coordinated international health plan built on a similar principle — donors supplying aid that directly invests in programs developed and managed by our partner countries and recipients cooperating toward a mutual end — can help jump-start an era of improved health, prosperity and stability in sub-Saharan Africa and other vulnerable regions.

Such a health plan needs to focus on building health systems and infrastructure based on partner-country priorities that integrate prevention, diagnosis and treatment across diseases rather than selectively targeting specific diseases. Disease-focused approaches, which have dominated traditional public health efforts, often exacerbate existing distortions in weak and underfunded health systems. Maternal and child health, a major focus of the Millennium Development Goals, has been a casualty of this approach; 27 countries made little or no progress in reducing childhood deaths between 1990 and 2006.

A move to an integrated approach is increasingly important. Noncommunicable diseases such as cardiovascular disease and cancer are compounding the burden from infectious diseases such as AIDS, malaria or tuberculosis. Critically, 80 percent of deaths from chronic diseases including malignancies, chronic obstructive pulmonary disease, cardiovascular disease, diabetes and mental health disorders occur in developing countries. Emerging and under-recognized causes of morbidity and mortality, including trauma and environmental catastrophes, will also need attention.

An integrated approach would focus on increasing a country's capacity to deliver health care. For many

© AP Images

In 2008, Peru became the first country to launch a vaccination campaign to protect children and teenagers against hepatitis B.

countries, this strategy will require investing in human resources such as training doctors, nurses and other health care workers. Today, there is a shortage of approximately 2.4 million health professionals in 57 countries. Regions with the highest disease burden have the greatest need. Africa has 24 percent of the global disease burden, but only 3 percent of the global health care workforce, and only 1 percent of the world's health expenditure to rectify this imbalance. As the global HIV campaign has demonstrated, a strategic scale-up across health care systems from disease expertise to community support will be required.

More health care workers are needed, but also better trained ones. Donor countries can help by creating effective programs that invest in professional education and training designed to address the disease burdens of individual settings. Successful examples include:

• The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) launched a Medical Education and Nursing Education Partnership Initiative to strengthen medical and nursing health skills in 13 PEPFAR countries.

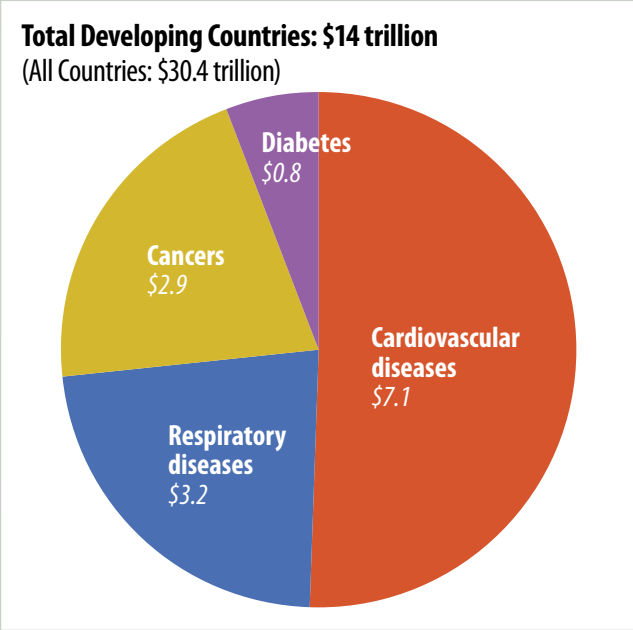
• Many academic medical centers such as the Massachusetts General Hospital or Brigham and Women's Hospital now partner with public-sector institutions in developing countries to help improve medical and public health education.

• The proposed Global Health Service Corps would be a U.S.-funded program to support U.S. health professionals who teach and train health care workers in recipient nations and thus directly increase health capacity in those countries.

By strengthening the capacity of countries to deliver health care and invest in the next generation of health professionals, programs like these could yield significant health gains and promote sustainability for relatively little investment.

Economic Burden of Noncommunicable Diseases: Developing Countries

The projected loss in gross domestic product from premature deaths in low- and middle-income countries, 2011-2030
(in trillions)



Source: World Economic Forum, Harvard School of Public Health, WHO

Conclusion

In our increasingly interconnected and interdependent world, no country can ignore the health problems of other countries. Because health and development are inextricably linked, failure to invest in health will fuel a vicious cycle of social instability, weak development, and lost economic productivity and growth. Coordinated, multilateral investment to build health care infrastructure in vulnerable countries can bolster health and economic development, and spark a cycle of health and progress that can be sustained over generations. ■

David Bangsberg is the director of the Massachusetts General Hospital Center for Global Health, director of International Programs at the Ragon Institute, and director of the International Program of the Harvard University Center for AIDS Research.

Vanessa Bradford Kerry is the associate director of Partnerships and Global Initiatives at the Massachusetts General Hospital Center for Global Health and the head of the program in Global Public Policy and Social Change in the Department of Global Health and Social Medicine at Harvard Medical School.

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A health worker extracts a guinea worm from the foot of 10-year-old Assana in Savelugu, Ghana. The international guinea worm eradication effort has reduced disease prevalence by 98 percent in 20 African and Asian countries.

What Works in Global Health Programs?

Amanda Glassman

According to the World Health Organization, ivermectin treatment can eliminate onchocerciasis, or river blindness, which affects 37 million people such as this Liberian man.

Over the past 60 years, there have been marked improvements in health around the globe. Every year, nearly four months are added to average life expectancy. Today, an average person in a developing country can expect to live 15 years longer than she or he would have expected to live in 1960.

These advances are attributable to many factors, most notably to economic growth and improvements in the health sector. Between 1952 and 1992, almost half of all health gains were from income growth. More efficient delivery of health care also can substantially decrease mortality and improve quality of life. For instance, access to appropriate health care can reduce infant deaths by 41 percent to 72 percent worldwide, according to a 2005 study from *The Lancet*, a medical journal.

The Center for Global Development conducted studies on factors related to success in global health programs through an aptly named initiative, "What Works?" A team of academics and researchers led by Ruth Levine pored over evaluation data to identify best strategies and practices.

The working group determined several key factors are common to the most successful programs, which include eradicating smallpox worldwide and eliminating polio in Latin America, and published its findings in *Millions Saved: Proven Successes in*

Global Health. These factors can be applied to health programs of all types. But the best approaches and practices identified are particularly important for public health efforts designed to address long-term problems that require sustainable solutions. The key factors include:

> ***Between 1952 and 1992, almost half of all health gains were from income growth.***

1. Predictable, adequate funding from international and local sources. The most successful efforts managed to obtain long-term commitments of financial support. Steady adequate funding is necessary to ensure that programs are sustained long enough to have a major impact. For example, funding for HIV prevention and treatment requires long-term and consistent funding to keep people on treatment, thus preventing disease progression and transmission.

2. Political leadership. Nearly all cases illustrate the importance of visible, high-level commitment to a cause. Political support brings health issues to the forefront, increasing accountability and public support. For example, in Thailand, the government has been actively involved in efforts to curb the growing HIV/AIDS epidemic. The Thai success is a testimony to the power of HIV prevention on the national scale.

© AP Images

A doctor at the Beijing Chest Hospital gives a patient a tuberculosis diagnosis.

3. Innovation at a reasonable price within an effective delivery system. Technology is only as effective as it is accessible and affordable. For example, development of a new health product or technology alone is not sufficient to ensure the success of a health intervention. But technological advances can help improve health if they are introduced within a functioning and sustainable health system. For example, GAVI Alliance, a public-private partnership, provides funding to strengthen health systems in conjunction with its vaccination projects.

4. Effective use of information. The importance of active management and dissemination of information is paramount. Essential elements include:

• Disseminating information about the extent of a health problem that raises public awareness and focuses leaders' and practitioners' attention on finding solutions.

• Conducting research on health behaviors and the effectiveness of different approaches to health services that can help shape the design of a program and increase its prospects for success.

• Providing information about programs, countries or regions making fast progress that can motivate program managers and health workers to strive for better results.

• Collecting information before and during the implementation of a program allows mid-program corrections or changes in strategy.

Other factors that contribute to the success of health programs include community participation and involvement of nongovernmental groups.

As aid budgets shrink, optimizing the performance of public health programs and systems is of increasing importance. The identification of global health best practices increases the likelihood that scarce resources will be used well. ■

Amanda Glassman is the director of Global Health Policy at the Center for Global Development in Washington.

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The Global Health Initiative: Maximizing Investment In Global Health

Lois Quam

The Global Health Initiative (GHI), the Obama administration's strategy to maximize the impact of U.S. investments in global health, aims to protect Americans, save millions of lives around the world and create strong nations.

GHI is designed to help people like 19-year-old Seng Srev. She has contracted malaria several times in her home village, Krachaleur, near Pailin, Cambodia.


THE
BEATLES

© AP Images

Village children in South Sudan collect drinking water using filters that prevent guinea-worm infection.

Our health agenda is taking on the hardest and most intractable challenges, including maternal and child mortality, HIV/AIDS and malaria.

This unified effort is driven by the combined leadership of key U.S. agencies and builds on current programs, such as the President's Emergency Plan for AIDS Relief (PEPFAR) and the President's Malaria Initiative (PMI), to deliver a focused, cost-effective and results-oriented program for enhancing global health. To achieve its goals, GHI also reaches beyond the health sector to areas that intersect with health, such as safe water, sanitation, health financing and education for girls.

In 2010, the United States made its first multiyear pledge to the Global Fund to Fight AIDS, Tuberculosis, and Malaria. GHI enables the United States to enhance the impact of its overall investment in global health by leveraging funds provided by other donors through entities such as the Global Fund. GHI also promotes smart integration among U.S.-supported disease-specific programs. For instance, under PEPFAR, the U.S. Agency for International Development, Centers for Disease Control, Peace Corps, and Department of Defense are jointly developing effective strategies to save the lives of mothers and infants during the crucial first 24 hours of labor and delivery, when more than two-thirds of maternal deaths and 50 percent of infant deaths occur.

GHI is rooted in seven core principles:

- Focusing on woman, girls and gender equality.
- Encouraging country ownership and investing in country-led plans.
- Building sustainability through health systems strengthening.
- Strengthening key multilateral organizations, global health partnerships and private-sector engagement, and leveraging resources of key stakeholders.

• Increasing impact through strategic coordination and integration.

• Improving metrics, monitoring and evaluation.

• Promoting research and innovation.

By partnering with nations willing to invest in the health of their people, GHI promotes country ownership and sustainable health outcomes.

U.S. health programs are aligning their efforts and strengthening the knowledge base on how these principles advance health goals.

Through GHI, the United States also seeks to achieve major improvements in health outcomes by reforming the way it supports countries in delivering health services. Strategies include working to increase the number and types of local partners, such as nonprofit organizations, private businesses, civil society, faith-based organizations and partner governments, and strengthening the capacity of partner countries to lead, manage and oversee health programs.

By partnering with nations willing to invest in the health of their people, GHI promotes country ownership and sustainable health outcomes. In concrete terms, this means ensuring that partner countries can plan, manage, oversee and finance a health program responsive to the needs of their people. For instance, as the South African government has demonstrated commitment by funding its national AIDS response at rapidly increasing levels, the United States has taken steps to integrate its vast network of prevention, treatment, care and health-system-strengthening activities into the broader strategic vision of the government of South Africa. This approach fosters collaboration with country partners to jointly identify and improve their health systems.

Through GHI, the United States is challenging the world and encouraging the private sector, multilateral institutions and other governments to increase their investments, while making sure that partner countries build self-sufficiency. By leveraging successful platforms, such as PEPFAR and PMI, and utilizing a coordinated, efficient and strategic approach, GHI will advance the U.S. commitment to save lives and make a significant difference in global health. ■

Lois Quam is the executive director of the Global Health Initiative.

The AIDS hospice at White River Junction, South Africa, is partly funded by PEPFAR.

Health Program Evaluations Add Up

Suz Redfearn

When money gets allocated for a health initiative in a developing country, the pressure builds quickly to implement the initiative immediately. And yet rushing in and setting up intervention programs too fast can jeopardize the ability to learn, in the end, whether the project really helped those who needed the help.

A Rwandan mother and child sleep under a bednet treated with insecticide to prevent malaria.

Courtesy of Partners in Health

© AP Images

What actually works against malaria? Bednets or their cheerful attitude?

Thus, in recent years, the tide has turned toward first setting up systems to evaluate the effect of a program as it unfolds.

"To truly know whether a project is working, you need to know what was happening in the beginning with a baseline in both the program and nonprogram areas, in the middle with a midline evaluation, and then at the end, tracking the changes as you go," said Sian Curtis, project director of Monitoring and Evaluation to Assess and Use Results (MEASURE), a U.S. Agency for International Development (USAID) program run by the Carolina Population Center at the University of North Carolina at Chapel Hill.

MEASURE runs more than 120 projects in more than 20 developing countries to strengthen health monitoring, evaluation and information systems.

MEASURE faces major obstacles: Many poor countries lack not only the capability to collect health statistical data, but also systems that register births and deaths accurately. One of MEASURE's ongoing efforts is the Measurement, Learning and Evaluation (MLE) Project, which focuses on the Urban Reproductive Health Initiative aimed at improving the health of the urban poor in India, Kenya, Nigeria and Senegal. MLE helps the initiative gather data that allow it to truly see which of its efforts is working and which is not.

Do Bednets Work?

Dismissing measurement and evaluation of a health program can lead to waste of funds and a failure to provide care in areas where it is needed, said Emmanuela Gakidou, director of education and training at the Institute for Health Metrics and Evaluation (IHME) at the University of Washington.

As an example, she points to malaria in Zambia. Child mortality in that country has plummeted in the last decade, while the distribution of bednets has skyrocketed. (Bednets keep malaria-carrying mosquitoes away from people as they sleep.) Many observers directly correlate the two. But because many other health interventions were undertaken at the same time that might have contributed to Zambia's drop in infant mortality, the IHME believes that linking the two directly may not be appropriate.

"It's an easy leap to make, but it's not scientifically accurate," Gakidou said. As no baseline measurements were taken prior to massive bednet distribution or efforts

to spray houses with pesticides, the IHME is combing through census and other data. It tries to piece together baseline numbers retroactively, as well as data on what effect each intervention had, in the hope that a clearer picture will emerge about exactly which efforts have improved child mortality numbers. The undertaking is called the Malaria Control Policy Assessment Project, and is soon to wrap up in Zambia but is just getting under way in Uganda, where a similar situation exists.

Gathering baseline data before launching health initiatives and midline data later is gaining acceptance as a necessary element of health programs.

Metrics Matter

Thankfully, Gakidou said, gathering baseline data before launching health initiatives and midline data later is gaining acceptance as a necessary element of health programs. So evaluating them in the future is likely to become easier. President Obama included a focus on health program measurement and evaluation in his 2010 policy directive on development; such evaluation is also listed as part of the 2009 Global Health Initiative's core principles.

In encapsulating the role of careful evaluation and accurate metrics in global health efforts, Curtis said, "It is also about trying to promote a culture to use information to produce better health outcomes." ■

Suz Redfearn is a freelance writer specializing in health issues.

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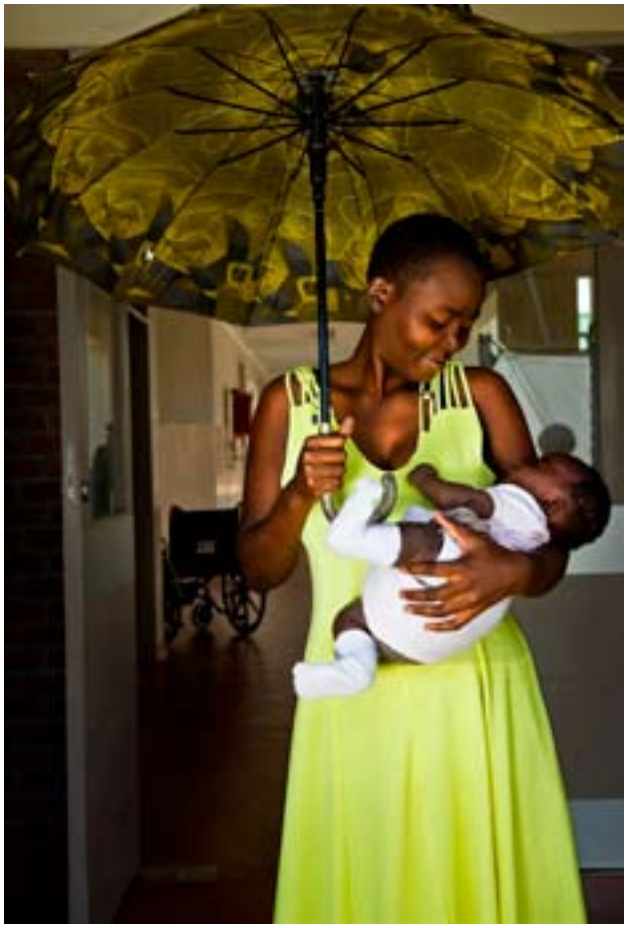
What we learn from you may help you and others.

HIV-Infected Mothers for Healthy Babies

Maya Kulycky

Teresa Njeri, a single mother in Kiambu on the northern border of Kenya's capital, Nairobi, has a dream — a home for herself and her son. Teresa bought a plot of land, and when she looks out over it, she pictures the house she plans to build. Planning for a bright future, and having the means to make it a reality, is a big change for her. Ten years ago, Teresa was convinced that she and her son were going to die.

An 18-year-old South African orphan whose mother died of AIDS



Courtesy of m2m

After a meeting of a m2m support group at Bwaila Hospital in Malawi: It was long but worth it, wasn't it?

Against All Odds

In 2001, Teresa was diagnosed as HIV-positive when she was five months pregnant. "The first thing that came to my mind was death," she recalled. "All of my hopes were shattered." Teresa joined a prevention of mother-to-child transmission (PMTCT) program and disclosed her condition to her husband, who also tested HIV-positive. Like others who were afraid of the stigma associated with HIV, the couple hid their condition. They separated shortly after the birth of their son, who is HIV-negative.

A few months later, Teresa was hospitalized and told she had AIDS. When her father found out about it from the hospital staff, he told the rest of her family and took her son away to live in the family's village. "So I was left alone, all alone in the world," Teresa said.

She fled, sought treatment, and began to volunteer, speaking to others with AIDS. But she said she still "didn't have any focus in life. I didn't have any hope." Then Teresa found mothers2mothers.

Mothers2mothers — funded by the U.S. Agency for International Development (USAID), other government agencies and private corporations and foundations — trains and employs HIV-positive mothers as "Mentor Mothers" in sub-Saharan Africa to provide counseling, education and support to newly diagnosed HIV-positive pregnant women and new mothers. It reaches about 85,000 new pregnant women and new mothers a month to prevent mother-to-child transmission of HIV.

The program provides a remedy to a region that — desperately short of doctors and nurses — is struggling under the burden of HIV/AIDS.

Mentor Mothers

Mentor Mothers work side by side with doctors and nurses in health care facilities and assume responsibility for ensuring that patients understand, accept and adhere to the treatments that are prescribed.

The results are clear. In Lesotho, 92 percent of pregnant women who attended mothers2mothers services three or more times took antiretroviral medication (ARV) during pregnancy compared with 71 percent of those

Courtesy of m2m

A m2m client at her home in Maseru, Lesotho: Look, my baby is healthy!

who attended once. Taking ARV is critical to decreasing mother-to-child transmission of HIV. Furthermore, 97 percent of frequently attending mothers2mothers clients (versus 73 percent of those who attended once) underwent tests that identify the stage of their disease and are a critical first step to getting life-saving ARV treatment.

The program provides a remedy to a region that is struggling under the burden of HIV/AIDS.

Women are empowered by the support they receive in mothers2mothers programs, and peer educators become role models in their communities, while earning a salary and gaining valuable work experience.

Teresa credits mothers2mothers with giving her a sense of purpose, and her mothers2mothers colleagues with encouraging her to pursue her degree. She is studying community health and development. "I feel like God created me … to talk to these women, and help them, empower them, encourage them," she said.

Teresa points to her success in helping a pregnant, HIV-positive woman from the traditional African religion of Wakorino, whose members do not seek professional medical care. The woman gave birth to an HIV-negative child. "I feel like a star," Teresa laughed. ■

Maya Kulycky is global communications manager at mothers2mothers.

The opinions expressed in this article do not necessarily reflect the views or policies of the U.S. government.

Courtesy of m2m

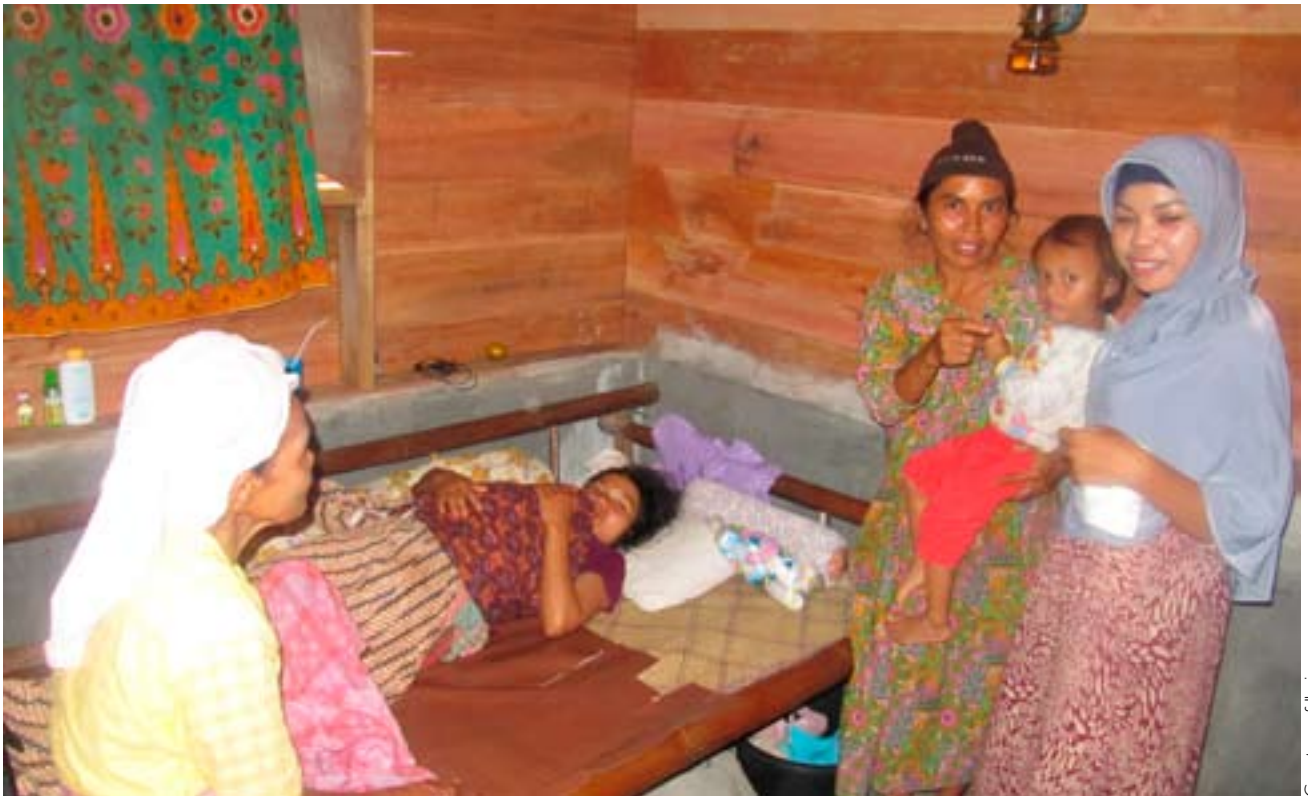
A Mentor Mother talks to a HIV-infected patient at Hlathikhulu Government Hospital in Swaziland.

Midwives Live Up to Their Calling

Katherine McConnell

More than 200,000 midwives in Indonesia play a crucial role in caring for the reproductive health of women and providing family planning services.

In 2005, midwife Revita, right, provided medical care to pregnant women and newborn babies in a makeshift clinic in the tsunami devastated Aceh province.



Courtesy of Jhpiego

With members of her family at her bedside, Halimah holds her newborn son kangaroo-style.

When Halimah, a 16-year-old Sumatran, gave birth to her first child prematurely in the village of Suenebok Lhong in Aceh province, Indonesia, the baby weighed only two kilograms and didn't cry. The midwife, Desita, recognized that the baby was suffering from asphyxia, or inadequate oxygen supply, and quickly cleared his airway to stimulate breathing. The baby let out a cry, and Desita placed him on his mother's chest so Halimah could begin breastfeeding.

I can resuscitate this baby, Desita remember thinking.

The baby, named Alif, was at risk of dying from hypothermia because such small infants have difficulty maintaining body temperature. To keep Alif warm, Desita taught Halimah to swaddle her son to her chest — providing skin-to-skin contact — and to cover his head with part of the swaddling cloth. This method, called kangaroo mother care, is an intervention developed in 1978 at the Universidad Nacional de Colombia to help low birth-weight babies survive in remote and rural poor areas where incubators are either unavailable or unreliable.

Kangaroo mother care is promoted by the World Health Organization as a simple and effective way to help nurture preterm infants when an incubator is not available. The key points of kangaroo care are early and prolonged skin-to-skin contact between mother and baby; ideally, exclusive breastfeeding; and adequate follow-up by a midwife or other trained individual.

Before Desita left Halimah's house, she checked the baby's temperature to be sure that it was within the normal range.

Learning To Save Lives

Found in almost every village, the much-trusted midwives attend some 50 percent of births, and provide the majority of prenatal and newborn care.

Desita learned midwifery skill under a program funded by the U.S. Agency for International Development (USAID). Since 1997 USAID's lead partner in maternal and child health, Baltimore-based Jhpiego, has trained thousands of urban and rural midwives in Indonesia and 150 other countries. Trained midwives teach their skills to colleagues to expand the reach and effectiveness of the program.

Another Indonesian midwife, Jauniwati, provides prenatal care to more than 350 women a month. One night, the husband of 34-year-old Yudawastu came to Jauniwati's door in Indrapuri, Aceh province, holding his

hemorrhaging wife, who had just given birth. Jauniwati stabilized the new mother by giving her intravenous saline (salt water) and making sure the placenta was delivered. That saved the mother's life.

Hemorrhage is the leading cause of death of pregnant women around the world, followed by hypertension and infection, according to Anne Hyre, Jhpiego director in Indonesia. Jhpiego-trained midwives routinely carry a satchel with essentials such as a blood pressure cuff, stethoscope, saline solution, intravenous tube and disinfectant. But sometimes the midwives' best tool is accurate information — for example, about proper infant feeding practices and infection prevention.

The much-trusted midwives attend some 50 percent of births and provide the majority of prenatal and newborn care.

Jauniwati believes being a midwife is her life's calling. "I believe many people still need my help," she said.

Hyre said that enthusiasm is a feeling almost all midwives share. "Without that passion, it's challenging to devote the time and energy required to assist women though long labors," she said. "These midwives are inspirational." ■

Katherine McConnell is a staff writer at the Bureau of International Information Programs.

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Courtesy of Jhpiego

An Indonesian midwife trained by Jhpiego checks on a patient.

To Russia with Heart (Skills)

Alexandra Draggeim

The temperature in Kemerovo, the Siberian city that is the administrative center of the Kemerovo Region in Russia, dropped to 30 degrees below zero Celsius, but the Kemerovo Center of Cardiology remained busy.

The Pushkin Square in Kemerovo

Courtesy of Irina Samonova

Courtesy of RAMA

Doctors Bill Novick, left, and Elgudin, right, perform surgery on 9-year-old Artem during the 2011 mission to Kemerovo.

An international medical team worked in the cardiac center for two weeks in February 2010 to save the lives of young patients suffering from congenital heart disease as part of a mission organized by the Russian American Medical Association (RAMA).

With about 500 members and chapters in 40 U.S. states and Canada, RAMA is a network of medical professionals who help to organize humanitarian projects in Russian-speaking countries. Most members are Russian speakers who collaborate with American and Canadian colleagues on projects such as the Siberian Pediatric Heart Project (SPHP).

Courtesy of RAMA

Elgudin checks on Artem's recovery progress.

Second Chances

The SPHP was launched in 2007 in Kemerovo by Dr. Yakov Elgudin, who, with the help of the International Children's Heart Foundation (ICHF), recruits doctors, nurses and other volunteers, most of whom are Americans. The doctors take leave or use their vacation time to travel to the remote Russian area and operate on infants and train local doctors.

According to Elgudin, 250 to 300 children in the region are born with a heart defect every year.

"With appropriate surgery most of them will

have a second chance at life," ICHF said in a 2010 press release.

In 2011, during trips to Siberia, RAMA doctors performed several operations, including two that were done for the first time in Russia. They also trained their local counterparts on everything from diagnosis to post-operative treatment. The goal is to help transform the newly constructed Kemerovo Cardiology and Cardiac Surgery Center into a regional cardiac center.

RAMA doctors are fully committed to their work in Russia, according to Lyuba Varticovski, a RAMA founder. "If we go there and do it halfheartedly, it will not even be personally satisfying," she said.

The Russian-American doctors follow their patients' progress over years. Varticovski said that she does it by examining pathology reports and by conferring with local doctors. "We work as a team," she said.

Up To American Standards

Varticovski, who studied medicine in Russia, Colombia and the United States, said that medical standards in other countries often differ from those in the United States. "To set up the highest level of practice, we really need to look at the American standards," she said.

RAMA doctors bring with them American equipment and medications, often donated by the U.S. government or private companies. For example, in 2009, the U.S. National Institutes of Health donated to a Moscow institute a sophisticated machine for sorting cell mixtures that has broad medical applications.

RAMA is expanding its work by starting projects modeled on the SPHP in Tomsk, Krasnodar and other cities. In addition, Boris Vinogradsky, the founding director of RAMA, has developed a program for Russian medical professionals to come to leading U.S. medical clinics for study visits.

"There's no better policy than improving health of a country based on education and direct example," Vinogradsky said. ■

Alexandra Draggeim is a freelance writer.

The opinions expressed in this article do not necessarily reflect the views or policies of the U.S. government.

Courtesy of RAMA

Elgudin, right, and a Kemerovo cardiologist with a young patient and her mother a year after the girl's cardiac surgery.

Women's Wellness Is in Vogue in Tashkent

Jeff Baron

When the Women's Wellness Center opened its doors as a private, nonprofit outpatient clinic in Tashkent, Uzbekistan's capital, in 2000, there were questions about demand for its services.

Tashkent women wait to celebrate a national holiday.

© AP Images

Not even cold weather can prevent these women from getting to the Women's Wellness Center.

Alisher Ishanov, who works on health care issues for the U.S. Agency for International Development (USAID) in Tashkent, said he wondered who would go to the Wellness Center instead of to the nearby public hospitals for care.

Now he knows: Women by the thousands — about 20,000 a year — are willing to pay a modest price for high-quality care and a holistic approach to women's health.

"I've seen there women who are coming from high strata of society — they are being dropped there by or driven there in fancy cars — as well as ordinary women," Ishanov said. "And this center kind of gave opportunity for different people, from different demographics, to have access to quality services."

Test And Educate

Dilmurod Yusupov, who has headed the Women's Wellness Center since its inception in 1997 as part of the Tashkent Medical Institute, said the clinic has brought some important firsts to Uzbekistan: It was first to offer maximum services "under one roof" for women of different ages, first to address broad aspects of reproductive health, and first to offer Pap smears for early detection of cervical cancer.

Yusupov said patient education is a large part of the clinic's job, and it provides women information on such life-saving issues as breast self-examination and sexually transmitted infections. He said the center also has helped women overcome their initial hesitation about the Pap smear and it now performs more than 5,700 a year.

Another important innovation: The Women's Wellness Center was a pioneer as a private, fee-for-service clinic. Initially supported by USAID, it has become self-sustaining, operating without government or donor funds. Government-supported programs are the traditional model for health care in Uzbekistan, but Ishanov said fee-for-service programs, some of them very expensive, have become more common.

At the women's center, "fees are set below average, so many people could afford it," Yusupov said. "Our experience proved that a not-for-profit private entity could be financially sustainable without any governmental and donors' support."

Women are willing to pay a modest price for high-quality care and a holistic approach.

Expanding The Reach

The center has even improved the health of women who never walked through its doors. Its professionals, trained by experts from the United States and elsewhere, in turn, have trained more than 400 other physicians through a partnership with the Uzbek Ministry of Health. Support for training has come from USAID, the U.N. Population Fund, Medical Teams International, DVV International, a German adult education outfit, and the French and Israeli embassies.

One measure of the center's success is its stability. It has not been affected by a huge outflow of Uzbek professionals, especially health workers, who are looking for better opportunities abroad.

"It's remarkable that all people who are trained at the Women's Wellness Center, they're staying at their jobs and they're satisfied," Ishanov said. "Although they're not earning a lot — I wouldn't say that they became millionaires — the job satisfaction is in place."■

Jeff Baron is a freelance writer.

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Courtesy of US AID

Staff members perform an ultrasound examination at the Women's Wellness Center.

Listening to the Community to Lay a Health Foundation

Lisa Armstrong

Within hours after the January 12, 2010, earthquake in Haiti, the people of Partners in Health (PIH) started arriving in Port-au-Prince to care for injured people caught in the rubble of collapsed buildings.

PIH volunteers transported critically ill, 5-year-old Betina from Port-au-Prince, Haiti, to a hospital in Philadelphia in January 2010.

Courtesy of PIH

PIH member Sarah Marsh feeds a one-day-old infant born on the street in Port-au-Prince.

First, the organization's Haitian doctors and staff came from towns around the country, including Cange, where Zanmi Lasante ("Partners in Health" in Haitian Creole) is headquartered.

Then hundreds of volunteers arrived from across the United States and other countries. They set limbs, inoculated, and treated tuberculosis and other illnesses. In tent city hospitals and makeshift clinics, Haitian and American doctors and nurses worked side by side. "We were at some point seeing 5,000 to 7,000 people a week," said Donna Barry, who is advocacy and policy director at PIH.

Solidarity: The Key To Success

Solidarity with local communities sets PIH, which has been working in Haiti since the 1980s, apart from many other organizations. PIH's efforts have succeeded because the staff respects and listens to what local communities want, rather than imposing notions of "what is right" from outside.

"[One] thing that was obvious, even in the 1980s, was that Haiti was a veritable graveyard of development projects, with lots of externally imposed programs," said Dr. Paul Farmer, who co-founded Zanmi Lasante with Haitian community leaders and an Englishwoman, Ophelia Dahl, in 1983. More colleagues and friends, most U.S.-based, joined then to establish Partners in Health in 1987.

"PIH really started as a solidarity organization for Zanmi Lasante, which would be Haitian-run and employ Haitians," Farmer said.

Today PIH operates in Haiti and 12 other countries.

Listening Builds A Clinic

In the beginning, Dahl and Farmer were traveling the dusty trails, asking the people of Cange what they most needed. The response was almost always the same: a health clinic.

Dahl and Farmer formed a team that, with financial support from Boston businessman Tom White, built PIH's first community-based health project in Cange. It was not some stereotypical sub-standard health facility. "We started PIH in a squatter settlement, but never felt that the local GDP [gross domestic product] should

Courtesy of PIH

PIH founder Paul Farmer listens to the heart of a young Haitian patient.

determine the kind and quality of health care they should receive," Farmer said.

In addition to medical treatment, PIH provides food, schooling and other basic necessities. "We could have given people all the meds [medicine] in the world, but if they were going home to a place with no roof or access to water or food, they were going to die," Dahl said.

Even in the aftermath of the 2010 earthquake, PIH has focused on providing more than emergency medical care. "We've increased agricultural outputs," Barry said. "We have a farm near Cange, and they [PIH volunteers] immediately got to work growing corn crops, knowing that food needs would be high, as displaced people had moved out to the Central Plateau." Through this initiative, PIH ramped up its production of nourimanba, a peanut-based food ideal for fighting malnutrition, and also provided farming tools to more than 1,000 families.

PIH's efforts have succeeded because the staff respects and listens to what local communities want.

PIH staff and volunteers are encouraged by what they view as the results of Dahl's and Farmer's past efforts in the area. Today, children vaccinated through PIH efforts 20 years ago are healthy adults who, unlike most of their parents, have had access to education, adequate diets and medical care.

"The key is to focus on a small area where you can help, rather than saying, 'I am going to combat poverty or reforest the whole of Haiti,'" Dahl said. ■

Lisa Armstrong is a freelance writer who reported on the aftermath of the Haitian earthquake for the Pulitzer Center on Crisis Reporting.

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Attacking Ills with Simple Devices

Andrzej Zwaniecki

Student teams are increasingly venturing into an area previously dominated by lone seasoned inventors, changing the way innovations designed to help the poor are created and distributed.

Wearing a pair of self-adjustable glasses, she sees a brighter future.

Courtesy of Kopernik.info

Courtesy of the Institute for Global Health Technologies

Lila Kerr, right, and Lauren Theis with their salad spinner–turned-blood centrifuge

Invasion Of Student Innovators

Programs at major U.S. universities, such as Stanford, Rice and the Massachusetts Institute of Technology, bring together students and faculty from different departments and sometimes outside partners to work on low-cost, simple devices. Most programs cover the entire process, from identifying the needs in poor countries to developing appropriate business models to distribute final products.

"We're doing magical things in these classes," said Joel Sadler, Jamaican co-founder of ReMotion Designs, about Stanford's entrepreneurial design class.

Some of the "magical" ideas lead to startups intended to bring devices to those who need them. Sadler and his partners launched ReMotion Designs to market in India the JaipurKnee, an inexpensive leg prosthetic for amputees they had developed as part of Stanford's Biodesign program. At Rice University, student-developed technologies such as a medication-dosing device and the blood centrifuge already have benefited people in more than 20 less-developed countries.

Rice undergraduates Lila Kerr and Lauren Theis received an assignment: find an inexpensive way to diagnose anemia without electricity — a challenge that many health workers in poor countries face every day. For the solution the duo went to … the kitchen. Kerr and Theis modified an ordinary salad spinner into a $30 portable blood centrifuge that is being tested in Ecuador, Swaziland and Malawi.

However, getting such technologies to the people who need them remains a major challenge. Keeping costs low matters as much as usefulness when you are trying to market your product to people who live on only $1 or $2 a day.

Traditionally, medical devices have been sold or donated through charities, aid agencies or developing countries' governments. But Marc Epstein, a business professor at Rice University, said that, for the most part, neither governments nor aid organizations have been effective at distributing technologies. Breaking through government bureaucracy often proves time-consuming, and meeting government requirements can be too costly.

Such was the experience of the designers of Respira — a $1 paper device that facilitates the delivery of aerosolized asthma medication to children — when they

tried to introduce it in an emerging-market country. As for charities, their funding fluctuates, often leaving technology providers in limbo.

Look To The Market

The new generation of inventors increasingly opts for commercial distribution. A nonprofit enterprise with basic aspects of a commercial venture has the advantages of both, according to Emily Cieri, managing director of the Wharton Business School's entrepreneurial programs. The business structure ensures efficiency in the quest for the social impacts, she said.

Some startups are able to partner with multinational corporations to push their devices. But most rely on local partners to get a foothold in target countries. For example, ReMotion would not have been able to reach amputees in India without its partnership with an Indian nongovernmental group, according to Sadler.

"They know the country and patients, and serve as a bridge between us and the culture," he said.

But once trials are finished, he and his partners plan to commercialize their ventures. ■

Andrzej Zwaniecki is a staff writer at the Bureau of International Information Programs.

Courtesy of ReMotion Designs

With his JaipurKnee, he can finally climb the tree.

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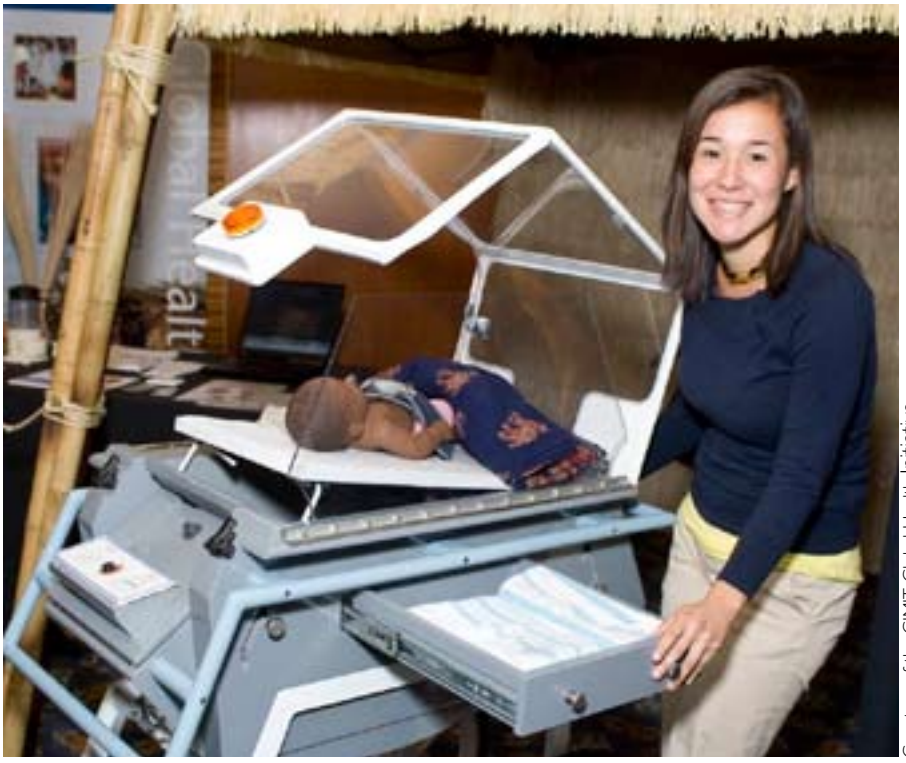


Courtesy of the CIMIT Global Health Initiative

Aya Caldwell of the Global Health Initiative Program and an infant incubator made from car parts by Design that Matters

Additional Resources

Websites on global health

(Scan QR codes with your mobile phone to go to respective Websites.)

Bill and Melinda Gates Foundation: Global Health Program, a private foundation focusing on health problems that affect developing countries.
http://www.gatesfoundation.org/global-health/Pages/overview.aspx

Center for Global Development: Millions Saved, a research project that examines what works in international health programs.
http://www.cgdev.org/section/initiatives/_archive/millionssaved/overview

Global Health Council, a diverse alliance of health care professionals, nongovernmental groups, government agencies and others dedicated to improving the health of the poor.
http://www.globalhealth.org/

Global Health Initiative, a U.S. government program designed to make international health assistance more accountable and effective.
http://www.ghi.gov/

Measure Evaluation, a project that provides technical support to developing countries to help them measure, monitor and evaluate health programs.
http://www.cpc.unc.edu/measure/about

mothers2mothers, a nongovernmental group that helps to prevent mother-to-child transmission of HIV in sub-Saharan Africa.
http://www.m2m.org/about-us.html

Partners in Health, a nongovernmental group that promotes integrated and community-based approaches to poverty and disease.
http://www.pih.org/pages/what-we-do/

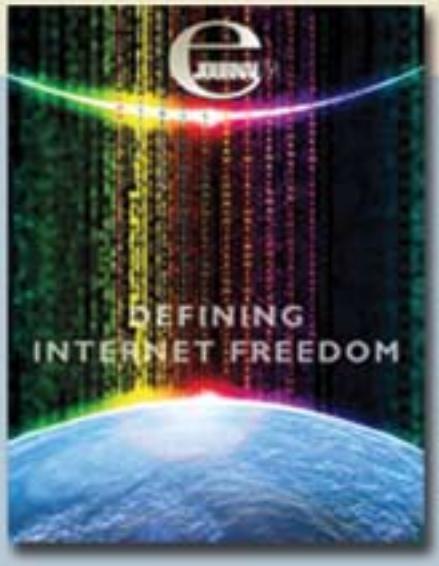
President's Emergency Plan for AIDS Relief, a U.S. government initiative to save the lives of people suffering from HIV/AIDS around the world.
http://www.pepfar.gov/

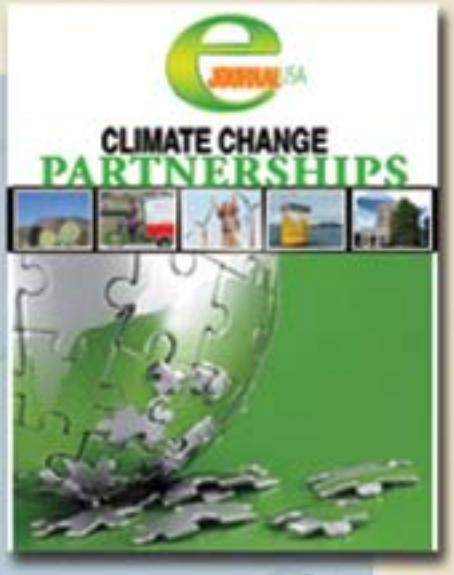
President's Malaria Initiative, a U.S. government program that aims to reduce malaria-related deaths by 50 percent in the 15 countries most affected by the disease.
http://pmi.gov/index.html

World Health Organization, a U.N. agency that coordinates international health responses.
http://www.who.int/en/

Courtesy of WHO

A baby is immunized at a health clinic in Kandahar, Afghanistan. Between 2003 and 2007, the percentage of the Afghan population with access to basic health services increased from 9 percent to 85 percent.





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